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Radiology

Contribution of Computed Tomography in the Diagnosis of Multifocal Non-Hodgkin's Lymphoma at the Mother-Child University Hospital the ''Luxembourg'' About a Case

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Abstract **Case Report**

Lymphoma is a malignant proliferation of lymphoid tissue cells. We report a case of multi-focal lymphoma of lymph node, pharyngeal, cardiac and splenic sites. This was a 19-year-old patient received in February 2023, at the radiology and medical imaging department of the Mother and Child University Hospital Center "Luxembourg" as part of the CT exploration of a lateral mass. -left cervical. On admission, the clinical examination found a patient with an altered general condition, moderately colored conjunctiva, normal blood pressure and temperature. Examination of the lymph node areas revealed a left latero-cervical swelling, and fixed bilateral axillary swellings, of firm consistency and irregular contours. Palpation revealed hepatosplenomegaly. Cardiopulmonary auscultation was normal. A cervico-thoraco-abdominal CT scan revealed irregular thickening of the left lateral wall of the oropharynx, a hypodense tissue mass in the right cardiac chambers, heterogeneous splenomegaly, cervical, mediastinal, axillary and abdominal ADP. The histological examination carried out after lymph node biopsy revealed a histological appearance of small cell lymphoma.
Conclusion: Lymphoma is a very common malignant tumor that can occur at any age. This tumor can affect all organs, however its cardiac location is rare. The positive diagnosis remains histological. Imaging plays an important role in the initial assessment, extension and surveillance.

Keywords: Lymphoma, lymphoid tissue cells, latero-cervical swelling, common malignant tumor.

INTRODUCTION

Lymphomas are defined as malignant proliferations of lymphoid tissue cells [1]. They constitute more than 25 types of tumors which can be lymph node and extra-nodal (cutaneous, digestive, bone, mediastinal, cerebral, hepatic, etc.) [2, 3]. These tumors are subdivided into 2 categories: Hodgkin lymphoma (HL) and non-Hodgkin lymphoma (NHL).

Hodgkin's lymphoma is characterized by the presence of Reed-Sternberg cells, thus making it fundamentally different histologically from non-Hodgkin's lymphomas [4].

Non-Hodgkin lymphomas represent a heterogeneous group of hematological diseases characterized by a malignant monoclonal proliferation of the lymphoid system (B or T cells) which tends to invade the entire body. This heterogeneity results in varied clinical, anatomopathological, immunological and cytogenetic presentations and therefore in a very different prognosis from one form to another [5]. Like all other tumors, the diagnosis of lymphomas remains histological.

Imaging is indicated in the diagnosis, extension and monitoring of lymphomas. Lymphomas can develop in any organ that contains lymphoid tissue. Multifocal localization of lymphoma is a rare form little described in the literature.

In Mali, very few studies have concerned the radiological aspects of lymphomas, it is in this context

that we report here a case of multifocal localization of non-Hodgkin's lymphoma in the radiology and medical imaging department of the CHU-ME on "Luxembourg"

OUR OBSERVATION

This was a 19-year-old patient received in February 2023 in the radiology and medical imaging department of the "Luxembourg" Mother-Child University Hospital as part of a CT exploration of a latero-cervical mass. LEFT.

The start of his illness dates back to 03 months marked by anorexia, asthenia, fever, night sweats and unquantified weight loss, prompting a medical consultation in a closer health center where he was treated for malaria.

The evolution was marked by the appearance of a left side-cervical swelling prompting a consultation in a clinic which referred him to the oncology department for better care.

On admission, he was a patient with no known medical-surgical or family history, with an altered general condition, moderately colored conjunctiva, blood pressure of 11/8 CmHg and a temperature of 36.5°C.

- Examination of the lymph node areas reveals a left side-cervical swelling, fixed, of firm consistency, with irregular contours and bilateral axillary swellings.
- Abdominal examination reveals hepatosplenomegaly.
- Cardiopulmonary auscultation was normal.

The clinical signs found motivated the performance of a cervico-thoraco-abdominal CT which revealed:

- At the cervical level, presence of an irregular thickening of the left lateral wall of the oropharynx enhancing in a moderate and heterogeneous manner (Fig1) measuring 32 x 29 mm (axial plane) responsible for a reduction in the pharyngeal lumen next to it.

This is associated with multiple bilateral jugulo-carotid adenopathy without fatty hilum, creating a magma on the left (Fig2) measuring 95 x 57 mm (sagittal plane).

- At the thoracic level, presence of a hypodense mass in the right cardiac chambers enhancing moderately and heterogeneously after injection of contrast product (Fig 3) measuring 114x72mm (coronal plane). It is associated with hypodense ADP without fatty hilum from the axillary and mediastinal site (Fig 4).

There was no pulmonary parenchymal lesion or pleuropericardial effusion.

On the abdominal level, the examination revealed heterogeneous splenomegaly with a poorly defined hypodense mass containing calcifications and enhancing in a moderate and heterogeneous manner after injection of contrast product.

There were multiple hypodense coelio-mesenteric and retro-peritoneal deep abdominal lymphadenopathy without fatty hilum of variable sizes producing a magma measuring 127x63mm (axial plane).

The liver was increased in size with regular contours and homogeneous density

Based on the CT results, a hematologic malignancy was suspected.

The histological examination carried out after lymph node biopsy revealed a histological appearance of small cell lymphoma.

4.2-ICONOGRAPHIES

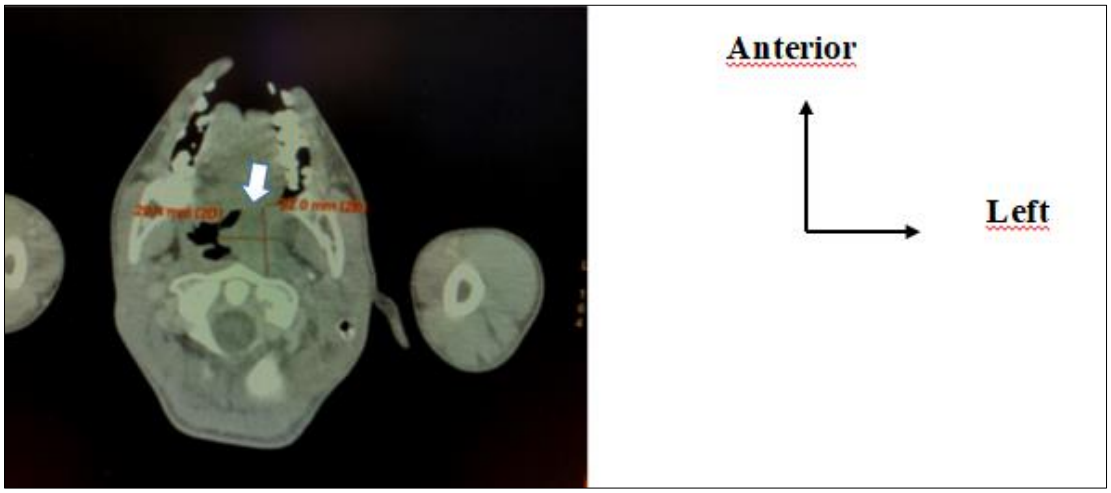

Fig. 1: Axial CT +injection section showing irregular thickening of the left lateral wall of the oropharynx responsible for a reduction in the facing lumen

Fig. 2. Cervical CT + injection : sagittal reconstruction showing a left side-cervical mass of heterogeneous tissue density with polylobed contours enhancing heterogeneously after PDC injection (a cluster of lymphadenopathy)

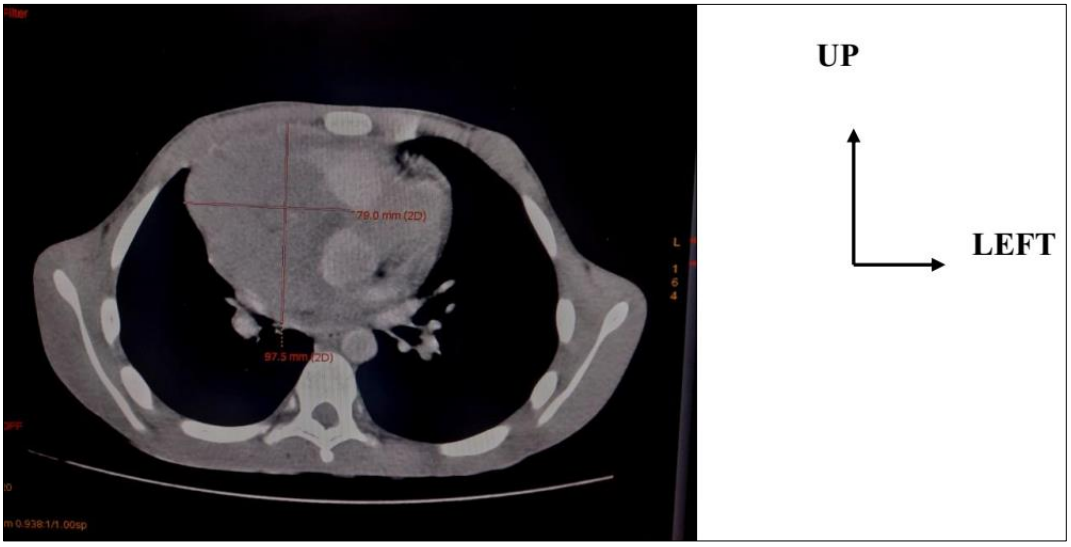

Fig. 3: Axial CT + injection section showing a tissue mass of the right cardiac chambers, hypodense, with irregular contours with heterogeneous enhancemen

Fig. 4: Axial+injection: chest CT section, showing an anterior mediastinal mass, hypodense tissue enhancing after injection of contrast product (Adenopathy)

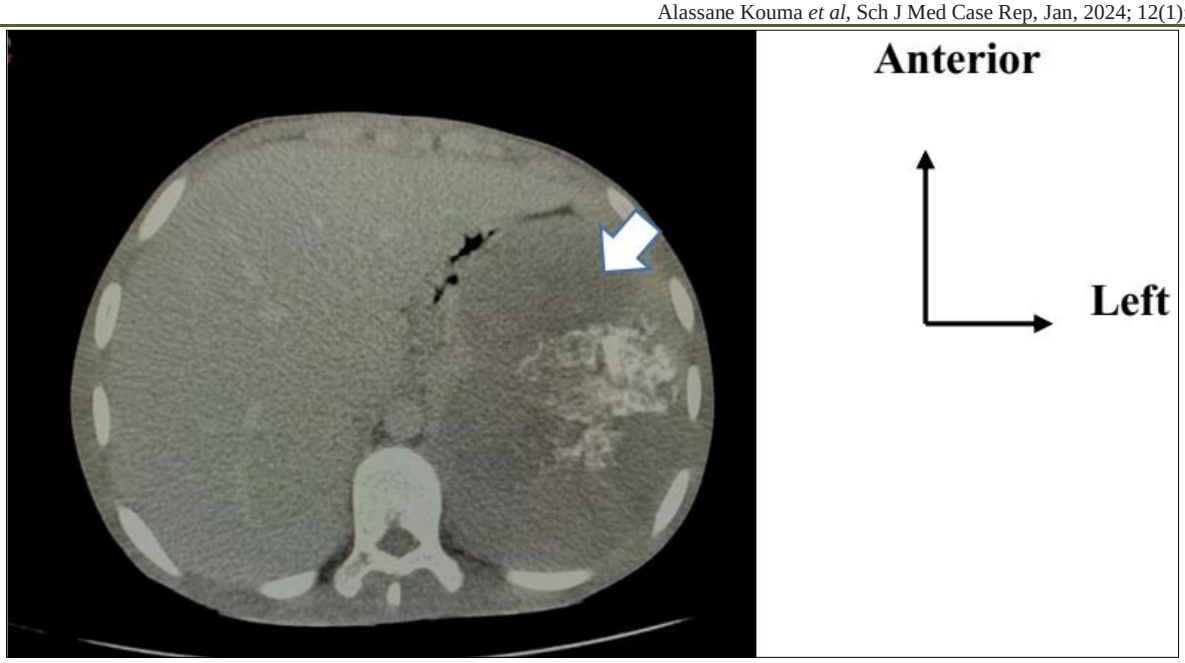

Fig. 5: Coupe axiale TDM après injection de produit de contraste (B), montrant une masse splénique tissulaire, de contours irréguliers renfermant des calcifications se rehaussant de façon hétérogène

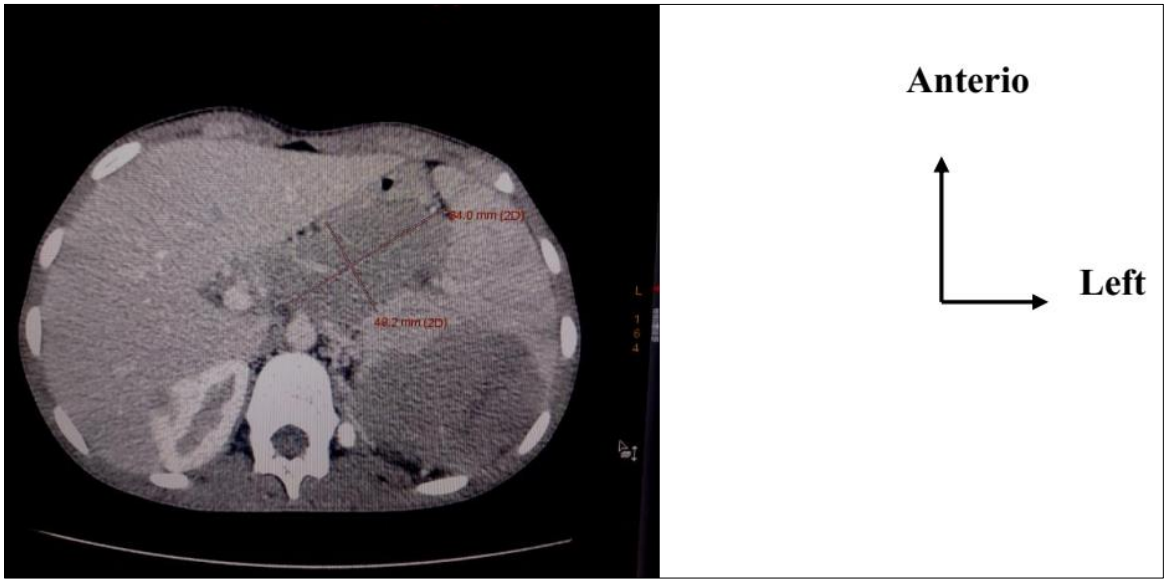

Fig. 6: Axial CT section after injection of contrast product (B), showing a deep abdominal mass, hypodense tissue enhancing after injection of contrast product (a cluster of lymphadenopathy)

DISCUSSION

Lymphoma is a tumor that can occur at any age. In our study, the patient was young, aged 19 years. Our result is close to those found by Mikdame *et al*., [6], who described multifocal lymphoma in 04 patients aged 46 and 47, 47 and 72 years respectively.

This result is different from that of Batti *et al*., [7], in Tunisia who described a multifocal lymphoma in a 72-year-old patient. The patient was male, which is consistent with the literature according to which the predominance of NHL is male with a sex ratio of 1.2 [8].

The mode of revelation was lymph node in our study in accordance with the literature where ADP constitutes the mode of discovery in 2/3 of cases [9-11].

We found a pharyngeal location of the lymphoma in our observation, which has been described by other authors. Ghita *et al*., [12], found that 53.7% of extra-nodal lymphomas in the ENT sphere are located in the pharynx.

The spleen being the largest lymphoid organ in the body, it is one of the frequent sites of lymphoma. This location has been described by several authors. S.

Amrani Idrissi *et al*., [13], described splenic lymphoma in a 64-year-old subject.

Amine Benmoussa *et al*., [14], described a case of primary NHL revealed by isolated splenomegaly. The cardiac location of lymphoma is rare, it has been described by other authors. Landrin *et al*., [15], described a case of right ventricular lymphoma.

Mandric *et al*., [16], in a series found a cardiac location in 15% of patients followed for NHL. In our study, the lymphoma was multifocal, lymph node, pharyngeal, cardiac and splenic.

This plurifocal localization has been described by several authors, however the affected organs differ from one author to another. G. Godlewski, *et al*., [17], described a case of dual localization of MALT lymphoma with gastric and thyroid involvement in lymphocytic thyroiditis.

Batti *et al*., [7], described lymphoma in the lungs and lacrimal glands. Mikdame *et al*., [6], described lymph node, pleural, hepatic and cardiac localization of lymphoma.

CONCLUSION

Lymphoma is a very common malignant tumor that can occur at any age. This tumor can affect all organs, however, cardiac location is rare. The positive diagnosis remains histological. Imaging plays an important role in the initial assessment, extension and surveillance.

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